

The embodiments in which an exclusive property or privilege is claimed are defined as follows:

1. A concealed sprinkler head comprising a housing having a central opening and a mounting surface, a thermally sensitive trigger assembly in fluid communication with said central opening, and a cover plate including a body member mounted to the mounting surface and having a periphery and an outer surface, said periphery having at least one passageway section and an adjacent periphery section adjacent said passageway section, said passageway section disposed further from said mounting surface than said adjacent periphery section is spaced from said mounting surface, said at least one passageway section configured to enable air to travel through a passageway defined thereby and towards said thermally sensitive trigger assembly.
2. The concealed sprinkler head of claim 1, wherein said at least one passageway section is a lip formed in at least a section of said periphery.
3. The concealed sprinkler head of claim 2, wherein said lip forms a crease in said body member, and wherein said crease is substantially linear.
4. The concealed sprinkler head of claim 2, wherein said periphery is substantially circular and said lip has an arcuate outer edge.
5. The concealed sprinkler head of claim 1, wherein said body member is formed with a rim projecting towards said mounting surface, said rim having an edge.
6. The concealed sprinkler head of claim 5, wherein said body member has a center, and at least one mounting tab extending from said edge of said rim toward said center.

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7. The concealed sprinkler head of claim 1, wherein said body member has an inner surface and a spring positioned between said inner surface and said mounting surface, said spring configured to thrust said member away from said mounting surface.

8. The concealed sprinkler head of claim 7, wherein said spring further comprises a first substantially linear section and a second substantially linear section joined by an arcuate section.

9. The concealed sprinkler head of claim 1, wherein said outer surface is generally planar, and wherein said at least one passageway section has an outer edge positioned a preselected distance from the plane defined by said outer surface.

10. The concealed sprinkler head of claim 2, wherein said lip projects away from said mounting surface at an angle between approximately 15° and 75°.

11. The concealed sprinkler head of claim 1, wherein said at least one passageway section further comprises at least one ridge formed in said periphery.

12. The concealed sprinkler head of claim 11, wherein said at least one ridge is a plurality of ridges placed in spaced relation.

13. A concealed sprinkler head comprising a housing having an annular flange and a central opening, a thermally sensitive trigger assembly in fluid communication with said central opening, and a cover plate including a body member having a periphery, a center and at least one mounting tab projecting from said periphery towards said center, said at least one mounting tab attached to said annular flange by a fusible material, and at least a section of said periphery

configured to enable the passage of air into said central opening and towards said thermally sensitive trigger assembly.

14. The concealed sprinkler head of claim 13, further comprising a spring positioned between said body member and said annular flange, said spring configured to thrust said body member away from said annular flange.

15. The concealed sprinkler head of claim 13, wherein said body member has a rim projecting towards said annular flange, said rim having an edge, wherein said at least one mounting tab extends from said edge.

16. The concealed sprinkler head of claim 13, wherein said body member substantially conceals said central opening.

17. The concealed sprinkler head of claim 13, wherein at least a section of said periphery is formed with a lip projecting away from said annular flange, said lip defining an air passageway section.

18. The concealed sprinkler head of claim 17, wherein said lip forms a crease in said body member, said crease being substantially linear.

19. The concealed sprinkler head of claim 13, wherein said body member has a substantially planar center section.

20. The concealed sprinkler head of claim 13, wherein at least a section of said periphery is formed with a cutout section, said cutout section defining an air passageway section.

21. The concealed sprinkler head of claim 13, wherein said periphery has a generally arcuate section and a generally linear section, said generally linear section defining an air passageway section.

22. The concealed sprinkler head of claim 21, wherein said annular flange is formed with a cutout section, said cutout section being in substantial registry with said generally linear section when said cover plate is attached to annular flange.

23. A cover plate for a concealed sprinkler head including a housing defining a mounting surface and having a central opening, and a thermally sensitive trigger assembly in fluid communication with the central opening, said cover plate comprising a body member having at least one undulation formed therein and a periphery, said at least one undulation forming at least one passageway section at said periphery to permit air to enter the central opening and travel toward the thermally sensitive trigger assembly.

24. The cover plate of claim 23, wherein said body member is attached to the housing by a fusible material.

25. The cover plate of claim 23, further comprising a spring positioned between said body member and the housing, said spring configured to thrust said body member away from said housing.

26. The cover plate of claim 23, wherein said at least one undulation is a plurality of undulations placed in spaced relation.

27. The cover plate of claim 23, wherein said plurality of undulations are formed in a radial pattern.

28. The cover plate of claim 26, wherein said plurality of undulations are formed in a longitudinal pattern.

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29. A concealed sprinkler head comprising:

a sprinkler body having a central orifice with an inlet and an outlet, said inlet configured for attachment to a fire extinguishing fluid supply line;

a deflector movably mounted to said sprinkler body;

a sealing assembly for sealing said outlet;

a thermally sensitive trigger assembly configured to releasably urge said sealing assembly into sealing engagement with said outlet;

10 a housing attached to said sprinkler body and having a bottom extending beyond said outlet, said thermally sensitive trigger assembly positioned between said outlet and said bottom of said housing; and

a cover plate removably mounted to said bottom of said housing, said cover plate having a periphery, wherein at least a section of said periphery is formed with at least one passageway section configured to enable air to travel between said passageway section and said bottom of said housing and towards said thermally sensitive trigger assembly.

30. The concealed sprinkler head of claim 29, wherein said at least one passageway section projects away from said bottom of said housing.

31. The concealed sprinkler head of claim 29, wherein said at least one passageway section is a lip formed in at least a section of said periphery.

32. The concealed sprinkler head of claim 31, wherein said lip forms a substantially linear crease in said cover plate.

33. The concealed sprinkler head of claim 29, wherein said cover plate has a center and a rim extending towards said bottom of said housing, said rim having an edge, and at least one mounting tab extending from said edge toward said center.

34. The concealed sprinkler head of claim 29, further comprising a spring positioned between said cover plate and said bottom of said housing, said spring configured to thrust said cover plate away from said bottom of said housing.

Sub. B 35. The concealed sprinkler head of claim 29, wherein said cover plate is formed with at least one undulation defining a ridge along said periphery, said ridge defining said at least one passageway section.

36. The concealed sprinkler head of claim 35, wherein said at least one undulation is a plurality of undulations placed in spaced relation.

37. The concealed sprinkler head of claim 29, wherein said periphery of said cover plate has a generally arcuate section and generally linear section, wherein said generally linear section defines said at least one passageway section.

38. A concealed sprinkler head comprising:

a sprinkler body having a central orifice with an inlet and an outlet, said inlet configured for attachment to a fire extinguishing fluid supply line;

a deflector movably mounted to said sprinkler body;

5 a sealing member for sealing said outlet;

a thermally sensitive trigger assembly configured to releasably urge said sealing member into sealing engagement with said outlet;

10 a housing attached to said sprinkler body and having a central opening and a bottom extending beyond said outlet, said bottom formed with an annular flange, said annular flange formed having at least one contact section depending below said annular flange; and

5 a cover plate having at least one mounting section having a contact member, said at least one mounting section joined to said at least one contact section by a fusible material such that in the assembled position, said contact section is in substantial registry with said contact member, said cover plate having a periphery formed with at least one passageway section configured to enable air to travel between said passageway section and said bottom of said housing and towards said thermally sensitive trigger assembly.

39. The concealed sprinkler head of claim 38, wherein said at least one cut-out section is three cut-out sections, and said at least one mounting section is three mounting sections.

40. The concealed sprinkler head of claim 39, wherein said cover plate has a rim formed with an edge and a center, each mounting section of said three mounting sections extends toward said center from said edge of said rim.

41. The concealed sprinkler head of claim 38, wherein said cover plate has a periphery, and a lip projecting from at least a section of said periphery, said lip projecting away from said annular flange, said lip defining said air passageway section.

42. The concealed sprinkler head as recited in claim 38, wherein said cover plate has a periphery and is formed with at least one undulation, said undulation defining an air passageway section at said periphery.

43. The concealed sprinkler head of claim 38, wherein said housing includes at least one air exhaust passageway.

44. The concealed sprinkler head of claim 38, wherein said housing has a bottom section formed with an outwardly extending ledge, said annular flange extending from said outwardly extending ledge.

45. The concealed sprinkler head of claim 44, wherein said outwardly extending ledge has at least one throughhole formed therein.

46. The concealed sprinkler head of claim 45, wherein said at least one throughhole is positioned in said outwardly extending ledge and is proximate to said at least one contact section depending from said annular flange.

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